

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 470A

Mile Post (ON)11: 24.539 mi

Bridge Key: F-17-HO

Inspection Date: 12/14/2011

Sufficiency Rating: 95.5 Not Eligible

Rgn/Sectn 2E/2M: 68
 Trans Region 2T: 02
 County Code 3: 035
 DOUGLAS
 Place Code 4: 45955
 LONE TREE
 Rte.(On/Under)5A: 1
 Signing Prefix 5B: 3
 Level of Service 5C: 1
 Directional Suffix 5E: 0
 Feature Intersected 6:
 ACRES GREEN DRIVE
 Facility Carried 7:
 SH 470 ML WBND
 Alias Str No.8A:
 Prll Str No. 8P
 F-17-HN
 Location 9: 328.05117409
 1.3 M W OF JCT I 25
 Max Clr 10: 99.99
 BaseHiway Net12: 1
 IrsinvRout 13A: 000000470A
 IrsSubRout No13B: 00
 Latitude 16: 39d 33' 51"
 Longitude 17: 104d 53' 50"
 Range18A: 67 W
 Township18B: 67
 Section18C: 4
 Detour Length 19: 0.6 mi
 Toll Facility 20: 3
 Custodian 21: 1
 Owner 22: 1
 Functional Class 26: 12
 Year Built 27: 1984
 Lanes on 28A: 3
 Lanes Under 28B: 4
 ADT 29: 53,000
 Year of ADT 30: 2007
 Design Load 31: 6
 Apr Rdwy Width 32: 52.0 ft
 Median 33: 1
 Skew 34: 1.00 °
 Structure Flared 35: 0
 Sfty Rail 36a/b/c/d: 1 1 1 1
 Rail ht36h: 34 "in"

Hist Signif 37: 5
 Posting status 41: A
 Service on/un 42A/B: 1 1
 Main Mat/Desgn 43A/B: 6 2
 Appr Mat/Desgn 44A/B: 0 0
 Main Spans Unit 45: 2
 Approach Spans 46: 0
 Horiz Clr 47: 51.5 ft
 Max Span 48: 70.5 ft
 Str Length 49: 139.5 ft
 Curb Wdth L/R 50A/B: 0.0 ft 0.0 ft
 Width Curb to Curb 51: 51.5 ft
 Width Out to Out 52: 55.0 ft
 Deck Area: 7,674.7 sq. ft
 Min Clr Ovr Brdg 53: 99.99
 Min Undrclr Ref 54A: H
 Min Undrclr 54B: 18.5 ft
 Min Lat Clmce Ref R 55A: H
 Min Lat Undrclr R 55B: 8.8 ft
 Min Lat Undrclr L 56: 4.501312267
 Deck 58: 7
 Super 59: 8
 Sub 60: 8
 Channel/Protection 61: N
 Culvert 62: N
 Oprtng Rtg Method 63: 5 No rating
 Operating Rating 64: 62.1
 Inv Rtnng Method 65: 5
 Inventory Rating 66: 37.0
 Asph/Fill Thick 66T: 004 "in"
 Str. Evaluation 67: 8
 Deck Geometry 68: 5
 Undrclr Vert/Hor 69: 5
 Posting 70: 5
 Waterway Adequacy 7: N
 Approach Alignment 72: 8
 Type of Work 75A:
 Work Done By 75B:
 Length of Improvment 76: 0.0 ft
 Insp Team Indicator 90B: RED TEAM
 Inspector Name 90C: TATALASKIT
 Frequency 91: 24 months
 FC Frequency 92A: -1
 UW Frequency 92B: -1
 SI Frequency 92C: -1
 FC Inspection Date 93A:

UW Inspection Date 93B:
 SI Date 93C:
 Bridge Cost 94: \$ 0
 Roadway Cost 95: \$ 0
 Total Cost 96: \$ 0
 Year of Cost Estimate 97:
 Brdr Brdg Code/% 98A/B:
 Border Bridge Number 99:
 Defense Highway 100: 0
 Parallel Structure 101: L
 Direction of Traffic 102: 1
 Temporary Structure 103:
 Highway System 104: 1
 Fed Lands Hiway 105: 0
 Year Reconstructed 106: 0000
 Deck Type 107: 1
 Wearing Surface 108A: 6
 Membrane 108B: 2
 Deck Protection 108C: 1
 Truck ADT 109: 5 %
 Trk Net 110: 1
 Pier Protection 111: #
 NBIS Length 112: Y
 Scour Critical 113: N
 Scour Watch 113M: 0
 Future ADT 114: 80,560
 Year of Future ADT 115: 2027
 CDOT Str Type 120A: CPGC
 CDOT Constr Type 120B: 31
 Inspection Indic 122A:
 Inspection Trip 122AA:
 Scheduling Status 122B:
 Maintenance Patrol 123: 30
 Expansion Dev/Type124: C
 Brdg Rail Type/Mod 125A/B: R 0
 Posting Trucks 129A/B/C: 0 0 0
 Str Rating Date 130: 1/24/1997
 Special Equip 133: -1
 Vert Clr N/E 134A/B/C: X 99.99 0.00
 Vert Clr S/W 135A/B/C: X 99.99 0.00
 Vertical Clr Date: 12/1/2005
 Weight Limit Color: 139: 0
 Str Billing Type: U
 Userkey 1 - System: ONSYS
 Userkey 7-Update Indic:

Inspector Name: TATALASKIT

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
26/4	Conc Deck/Coatd Bars	(SF)	7,673	100 %	7,673	0 %	0	0 %	0	0 %	0	0 %	0
109/4	P/S Conc Open Girder	(LF)	822	100 %	822	0 %	0	0 %	0	0 %	0	0 %	0
210/4	R/Conc Pier Wall	(LF)	35	100 %	35	0 %	0	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	110	100 %	110	0 %	0	0 %	0	0 %	0	0 %	0
234/4	R/Conc Cap	(LF)	49	100 %	49	0 %	0	0 %	0	0 %	0	0 %	0
300/4	Strip Seal Exp Joint	(LF)	105	100 %	105	0 %	0	0 %	0	0 %	0	0 %	0
301/4	Pourable Joint Seal	(LF)	110	56 %	62	44 %	48	0 %	0	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	50 %	1	50 %	1	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	50 %	2	50 %	2	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	280	100 %	280	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
359/1	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
530/1	Approach Guardrail A	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
26/4	Conc Deck/Coatd Bars	4 inches of asphalt. Newer overlay. Looks good.
109/4	P/S Conc Open Girder	Horizontal cracks at junction of web and top flange at the abutments. Cracking at closure pours of girder ends on both exteriors above the pier. Top flange of Girder 2C has been patched. See 2005 photo. Diaphragms missing at both locations in Bay B, where bridge was widened (PHOTO 1/08).
210/4	R/Conc Pier Wall	Hairline shrinkage cracks.
215/4	R/Conc Abutment	Light vertical cracks in backwalls and breastwalls. Horizontal crack at construction joint.
234/4	R/Conc Cap	Cap looks OK.
300/4	Strip Seal Exp Joint	New strip seal jts. at end of approach slabs per plans. Opened over 2 inches at A1, and opened 2.5 inches at A3. Filled with sand.
301/4	Pourable Joint Seal	These joints at bridge and approach slab junctions. Covered with asphalt.
321/4	R/Conc Approach Slab	Covered with new overlay.
325/4	Slope Prot/Berms	Concrete slope pave has pulled away slightly from the Abutments: up to 1.25 inch at left side of A1, up to 2.25 inches at A3. Minor horizontal cracking of original sections. Weeds and grass are growing from cracks. Slope pave paint is peeling at both abutments. Settling several inches at all conc. berms next to wings.

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326/4	Bridge Wingwalls	Light cracking at horizontal cold joint. Mod. vertical and diagonal cracks in transverse portion of both wing extensions on the right side, open 3/8 to 1/2 inches at each with seepage, rust stains and efflorescence. Concrete is breaking up at #1 left wingwall. See 2005 photo.
331/4	Conc Bridge Railing	Typical vertical cracks in both jersey barriers with efflorescence. Coating starting to peel off. Tire scuff marks at left side.
340/4	Superstr Cnc Coating	Looks OK.
341/4	Substr Conc Coating	Looks OK.
359/1	Soffit Smart Flag	Overhangs at piers have horizontal trans. cracks with light efflorescence and rust stains. A few trans. cracks with efflor. near Pier 2.
530/1	Approach Guardrail A	Approach rail at Abutment 1 is 2 inches low on left and right. Approach rails are breaking up. See 2005 PHOTOS.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
356.01	Curb & RI	12/1/2005	-1	2013	15000

Repair approach rails, as all four corners are breaking up, and settling.

Bridge Notes

Utilities: 1 inch diameter electrical conduit is mounted to both abutments under girders A, B, C, and in Bay C for lights.
All four corners of bridge approach are settling up to 2 inches.

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Inspection Notes

Time: 11:25	Temperature: 40 Degrees	Weather: Clear	Team Leader: TAT
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Scope:

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: **Type:** Regular NBI

Inspector: TATALASKIT

Inspection Team:

Inspection Date: 12/14/2011

Inspector

Inspector